AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

- 1. (previously presented) An apparatus for casting a structure comprising:
- a vertically parted sand mold assembly having a first side pattern defining a first impression and a second side pattern defining a second impression, at least one of said side patterns defining a molten metal pouring basin cavity communicating with a sprue, and at least one of said side patterns having a core, the core defining an imprint surface and said core defines an aperture that is configured to function as a gate which fluidly couples the pouring basin cavity to a separate casting cavity formed by the first and second impressions said core further defining a backsplash.
 - 2. (cancelled)
 - 3. (original) The apparatus of claim 1 wherein the gate is a notch gate.
 - 4. (cancelled)
- 5. (original) The apparatus of claim 1 wherein the core defines a J-shaped fluid trap.

- 6. (original) The apparatus of claim 1 wherein the first side pattern contains no feature of the cast part.
 - 7. (original) The apparatus of claim 1 wherein a core is a resin bonded shell.
- 8. (original) The apparatus of claim 1 wherein the gate contains a fusible plug.
 - 9. (original) The apparatus of claim 8 wherein the fusible plug is a steel disk.
 - 10. (original) The apparatus of claim 8 wherein the fusible plug is cup shaped.
- 11. (previously presented) The apparatus of claim 10 wherein the fusible plug has retention ears for coupling to the core.
- 12. (original) The apparatus of claim 1 wherein the gate contains a filter element.
- 13. (original) The apparatus of claim 12 wherein the filter element is a ceramic filter inserted within the gate.
- 14. (original) The apparatus of claim 12 wherein the filter element is a ceramic.

- 15. (original) The apparatus of claim 12 wherein the filter further comprises a fusible plug.
- 16. (original) The apparatus of claim 15 wherein the fusible plug is a steel disk.
- 17. (previously presented) The apparatus of claim 15 wherein the fusible plug is coupled to the core.
- 18. (original) The apparatus of claim 15 wherein the fusible plug is cup shaped.
- 19. (original The apparatus of claim 18 wherein the fusible plug has ears coupled to the core.
- 20. (original) The apparatus of claim 18 wherein the fusible plug is bonded to the core with an adhesive.
- 21. (original) The apparatus of claim 18 wherein the fusible plug contains an inoculant.
- 22. (original) The apparatus of claim 18 wherein the fusible plug assists in the formation of compacted graphite.

- 23. (original) The apparatus of claim 12 wherein the gate is a hole disposed through the core element.
- 24. (previously presented) An apparatus for casting a scroll component comprising:

a vertically parted sand mold assembly having a first side pattern defining a first impression and a second side pattern defining a second impression, at least one of said side patterns defining a molten metal pouring basin cavity communicating with a sprue, and at least one of said side patterns having a core, the core defining an involute imprint surface and the core defines an aperture that is configured to function as a gate, the aperture fluidly couples the pouring basin cavity to a separate casting cavity formed by the first and second impressions, wherein the aperture is defined between the pouring basin cavity and the separate casting cavity.

- 25. (original) The apparatus of claim 24 wherein the core defines a J-shaped fluid trap.
- 26. (original) The apparatus of claim 24 wherein the first side pattern contains no feature of the cast part.
- 27. (original) The apparatus of claim 24 wherein a core is a resin bonded shell.

- 28. (original) The apparatus of claim 24 wherein the gate contains a fusible plug.
- 29. (original) The apparatus of claim 28 wherein the fusible plug is a steel disk.
- 30. (original) The apparatus of claim 24 wherein the fusible plug is cup shaped.
- 31. (original) The apparatus of claim 24 wherein the fusible plug contains an inoculant.
- 32. (previously presented) The apparatus of claim 24 wherein the sprue and pouring basin cavity are formed in the second side pattern.
- 33. (original) The apparatus of claim 24 wherein the sprue and the pouring basin are formed in the first side pattern.

34. (previously presented) A method of casting a scroll component comprising the steps of:

providing a mold having a vertical parting line and a first and second side mold, at least one of said side molds defining a molten metal pouring basin cavity communicating with a sprue, the second side mold having a core, the core has an imprint surface and the core defines an aperture which fluidly couples the pouring basin cavity to a separate casting cavity defined by the mold therethrough, the core further defining a back splash;

providing a fusible plug in the aperture; and providing molten metal into the pouring basin.

- 35. (previously presented) The method of claim 34 wherein providing a fusible plug in the aperture, includes providing a fusible plug in the aperture which reduces the velocity of the molten metal entering the aperture.
- 36. (previously presented) The method of claim 34 wherein providing a fusible plug in the aperture, includes providing an inoculant.
- 37. (original) The method of claim 36 wherein providing a mold includes providing a riser neck and providing a fusible plug is providing a fusible plug in said riser neck.

38. (original) The method of claim 36 wherein providing a mold includes providing a riser neck and providing a fusible plug is providing a fusible plug in said riser neck.